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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/648,748

08/25/2003

Hung-Shan Wei

3750

25859 7590 05/13/2008
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EXAMINER

DANNEMAN, PAUL

ART UNIT

PAPER NUMBER

3627

MAIL DATE

DELIVERY MODE

05/13/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/648,748

Applicant(s)

WEI, HUNG-SHAN

Examiner

PAUL DANNEMAN

Art Unit

3627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s) Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s) Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This action is in reply to Applicant's response to the office action filed on 13 March 2008.
2. Claim 2 has been canceled.
3. Claim 10 is new.
4. Claims 1 and 7-9 have been amended.
5. All pending claims 1 and 3-10 have been examined.

Response to the Arguments

6. Applicant argues regarding **Claims 1-4** that Horne does not teach or otherwise suggest the following feature, ***"a computing unit configured for calculating material requirement quantities and available inventories according to obtained data, and for determining quantities of material shortage according to the material requirement quantities and the available inventories."***

Respectfully, Examiner disagrees for the following reasons:

- Horne, in at least Column 4, lines 21-27 discloses that the supply data stored in the database describe the attributes of the supply to be managed by the supply system. Specifically the supply data includes information such as the current inventory of the supply, expected increases to the supply inventory (such as new shipments), and expected reductions in the supply inventory (such as the use of the supply in the creation of a product).
- Horne, in at least Column 3, lines 40-51 further discloses that the supply system can help the user answer critical business question by interpreting the information buried in the user's Manufacturing Resource Planning (MRPII) or Enterprise Resource Planning (ERP) system. The supply system gives users the ability to simulate and analyze the impact of any opportunity or problem in the manufacturing environment. Horne in at least Column 4, lines 39-55 still further discloses an interface to popular MRP systems which may automatically update the

replenishment schedules of dependent demand items when production schedules change for their parent items.

Applicant further argues ***“Applicant submits that Horne does not teach or suggest the limitation of a material adjustment unit configured for allotting the related distributed inventories to replenish the available inventories when it is necessary to adjust the distributed inventories.”*** The Examiner respectfully disagrees for the following reasons:

- Horne in at least Column 1, lines 64-67 and Column 2, lines 1-14 discloses that the supply allocation system and method optimizes critical material planning decisions and dynamically substitutes and allocates constrained materials and unlike other material planning solutions, the supply allocation system optimizes the use of constrained materials using advanced substitution logic that considers alternate suppliers.
- Horne in at least Column 11, lines 38-63 discloses a substitution feature within the supply plan system which allows the user to schedule substitute components in assemblies when there is insufficient availability of the primary component and in-sufficient lead-time to acquire it. Horne in at least Column 12, lines 20-28 further discloses that parts left over after fulfilling a demand may be used as substitution parts in other demands. Furthermore, if demand is still not met or substitution is not allowed the supply system plans a Planned Supply Order (PSO) for the prime part.
- Horne in at least Column 23, lines 15-37 discloses that the supply system allocates necessary material to the demand with the highest priority.

Therefore, the Examiner maintains that Claims 1-4 are properly rejected and remain rejected.

7. Applicant argues regarding **Claims 5-8 and 10** that Horne does not teach ***“calculating a shortage quantity of the material; allotting the distributed inventory of the material if it is necessary to adjust the distributed inventory.”*** The Examiner respectfully disagrees for the following reasons:

- Horne in at least Column 22, lines 15-24 discloses a transfer order shortage report for intersite orders. Horne in at least Column 22, lines 25-35 discloses a supply plan critical shortage report.

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- Horne in at least Column 23, lines 4-37 discloses the supply system having at least three supply allocation priorities: Earliest Available Supplies, Best Fit Supply Allocation and Hard Supply Allocation, for allocating the necessary material to the demand with the highest priority.

Therefore, the Examiner maintains that Claims 5-8 and 10 are properly rejected and remain rejected.

8. Applicant argues regarding amended **Claim 9** in part recites:

"(c) calculating a shortage quantity of said material in inventory based upon a scheduled production plan of the order;

(d) if shortage, purchasing the material or reallocating the material, which is currently designated to another manufacturing order, to the order."

The Examiner respectfully disagrees for the following reasons:

- Horne in at least Column 23, lines 15-37 discloses that the supply system allocates necessary material to the demand with the highest priority.
- Horne in at least Column 22, lines 15-24 discloses a transfer order shortage report for intersite orders.
- Horne in at least Column 11, lines 38-63 discloses a substitution feature within the supply plan system which allows the user to schedule substitute components in assemblies when there is insufficient availability of the primary component and in-sufficient lead-time to acquire it. Horne in at least Column 12, lines 20-28 further discloses that parts left over after fulfilling a demand may be used as substitution parts in other demands. Furthermore, if demand is still not met or substitution is not allowed the supply system plans a Planned Supply Order (PSO) for the prime part.

Therefore, the Examiner maintains that **Claim 9** is properly rejected and remains rejected.

Status of the Claims

9. **Claims 1 and 3-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Horne, US 7,058,587 B1.

Claims 1, 5 and 9:

With regard to the limitations of a material management system:

- ***Obtaining manufacturing order related data from a Bill of Material (BOM) database,***
- ***Calculating material shortages,***
- ***Determining to purchase material or reallocate material to another order.***

Horne in at least Fig.1B, Fig.1C, Fig.1D, Fig.2 to Fig.9, Column 1, lines 15-20, and Column 2, lines 5-14 discloses a system for optimizing and allocating the supply of critical material components and manufacturing capacity based on a detailed analysis of bills-of-material and through the use of substitution logic that considers alternate suppliers and supports the complete product life cycle from design through end-of-life. Horne in at least Column 2, lines 23-37 further discloses balancing constrained material needs against production or current supplier commitments and evaluating potential shortages for substitution and contacting supplier alternatives via the Internet for availability and allowing for dynamic material substitutions and allocation in a profitable manner.

Horne in at least Column 1, lines 64-67 and Column 2, lines 1-14 discloses that the supply allocation system and method optimizes critical material planning decisions and dynamically substitutes and allocates constrained materials and unlike other material planning solutions, the supply allocation system optimizes the use of constrained materials using advanced substitution logic that considers alternate suppliers.

Horne in at least Column 11, lines 38-63 discloses a substitution feature within the supply plan system which allows the user to schedule substitute components in assemblies when there is insufficient availability of the primary component and in-sufficient lead-time to acquire it. Horne in at least Column 12, lines 20-28 further discloses that parts left over after fulfilling a demand may be used as substitution parts in other demands. Furthermore, if demand is still not met or substitution is not allowed the supply system plans a Planned Supply Order (PSO) for the prime part.

Horne in at least Column 23, lines 15-37 discloses that the supply system allocates necessary material to the demand with the highest priority.

Therefore, it would be obvious, at the time of the invention, to a person of ordinary skill to determine that Horne clearly anticipates the limitations of Applicant's invention and improves on the limitation of conventional MRP (material resource planning) logic.

Claims 3-4, 6-8 and 10:

With regard to the limitations:

- ***Calculating material shortages from data comprising manufacturing orders, bills-of-material, current inventory, and purchase orders.***
- ***Calculated material shortages are calculated from the gross requirement quantity, the available inventory and predicted delivery quantity.***

Horne in at least Fig.2 and Fig.3 discloses evaluating the supply plan and in Column 20, lines 22-25 discloses running a supply planner, matching specific supply against demand, making adjustments to the input data and outputting reports describing the results of the analysis and for mismatches in supply and demand, recommending the rescheduling or cancellation of work orders, purchase orders and inter-site orders. Horne in at least Fig. 4 and Column 37, lines 32-49 further discloses setting production objectives (priorities, etc.) and determining an optimal production sequence and still further discloses in at least Fig.5 and Column 39, lines 30-47 calculating a baseline supply plan, performing multiple supply plan runs over the same time span with consideration for the cost of ending inventory for each supply plan. Horne still further discloses in at least Fig.6 and Column 41, lines 6-28 optimizing the supply plan using current data such as the ending balances from the previous day's activities and in at least Fig. 7 to Fig.8 and Column 42, lines 3-58 optimizing the resources (work orders and supply orders) and prioritizing the supply orders (Column 43, lines 62-67).

Horne, in at least Column 4, lines 21-27 discloses that the supply data stored in the database describe the attributes of the supply to be managed by the supply system. Specifically the supply

data includes information such as the current inventory of the supply, expected increases to the supply inventory (such as new shipments), and expected reductions in the supply inventory (such as the use of the supply in the creation of a product).

Therefore, it would be obvious, at the time of the invention, to a person of ordinary skill to conclude that Horne's method of calculating material shortages from present and future inventory and orders anticipates Applicant's invention.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL DANNEMAN whose telephone number is (571)270-1863. The examiner can normally be reached on Mon.-Thurs. 6:30AM-5PM EST Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Florian Zeender can be reached on 571-272-6790. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Paul Danneman/
Examiner, Art Unit 3627

/F. Ryan Zeender/
Supervisory Patent Examiner, Art Unit
3627

8 May 2008